

2 / 15

ctacttctcg ctctgcttca tccactatt atgtatgagct ttgtgcaaaa ggggagctgg
 caaaggccca actcaagaga aaatgggggt attttggcaa catctctgtc cttgtttctc
 aataaagatg cctcccggga ctacatcggc actgagaata tgtttgtgat gtaccttgga
 gtctacaacc tgggggaccg tgaggctgaa ctccaagtgg accagatctt gaccaagagt
 gagactaagg aggagttat ggatcgggtg aaatttcaga gaatttatca gtttgcaagg
 cttaattaca ccaaaggagc cacatccagt aaaccagaaa cacccgaggt ctatgacatg
 gatggtagaa atagcaatac actccttaat ttggatcctg aaaatgttgt attttatgtt
 ggaggttacc caccgtgattt taaacttccc agtcgactaa gtttscctcc atacaaagggt
 tgtattgaat tagatgacct caatgaaaaat gttctgagct tgtacaactt caaaaaaaca
 ttcaatctca acacaactga agtggagcct tgtagaagga ggaaggaaga gtcagacaaa
 aattattttg aaggtacggg ctatgctcga gttccaactc aaccacatgc tcccatccca
 accrttgagc agacaattca gaccacgtg gatagaggct tgctgttctt tgcagaaaac
 ggggatcgct tcatatctct aaatatagaa gatggcaagc tcatggtgag atacaaactg
 aattcagagc taccaaaaga gagaggagt ggagacgcca taaacaacgg cagagaccat
 tcgattcaga tcaaaattgg aaaactccaa aagcgtatgt ggataaatgt ggacgttcaa
 aacactataa ttgatgggtga agtatttgat ttcagcacat attatctggg aggaattcca
 attgcaatca gggaaagatt taacatttct acgcctgctt tccgaggctg catgaaaaat
 ttgaagaaaa ccagtgggtg cgtttagattg aatgatactg tgggagtaac caaaaagtgc
 tcggaagact ggaagcttgt gcgatctgcc tcatttctca gaggaggaca attgagtttc
 actgatttgg gcttaccacc tactgaccac ctccaggcct catttggtt tcagacctt
 caaccagtg gcatattatt agatcatcag acatggacaa ggaacctgca ggtcactctg
 gaagatgggt acattgaatt gagcaccagc gatagcggcg gcccaatttt taaatctcca
 cagacgtata tggatggttt actgcattat gtatctgtaa taagcgacaa ctctggacta
 cggtctctca tcgatgacca gcttctgaga aatagcaaaa ggctaaaaca catttcaagt
 tccggcagct ctctgcgtct gggcgggagc aattttgagg gttgtattag caatgtttt
 gtccagaggt tatcactgag tctggaagtc ctagatttga ccagtaactc tctcaagaga
 gatgtgtccc tgggaggctg cagtttaaac aaaccacctt ttctaattgt gcttaaagggt
 tctaccaggt ttaacaagac caagactttt cgtatcaacc agctgttgca ggacacacca
 gtggcctccc caaggagcgt gaaggtgtgg caagatgctg atgggtcaagg acctcaaggc
 cccaaggag atccaggccc tctgggtatt cctgggagaa atgggtgacc tggtattcca
 ggacaaccag ggtcccctgg ttctcctggc cccctggaa tctgtgaatc atgccctact
 ggtcctcaga actattctcc ccagtatgat tcatatgatg tcaagtctgg agtagcagta
 ggaggactcg caggctatcc tggaccagct ggccccccag gccctcccgg tccccctggt
 acatctggtc atcctgggtc ccctggatct ccaggatacc aaggaccccc tggtgaaact
 gggcaagctg gtccttcagg ccctccagga cctcctggtg ctatagggtc atctggtcct
 gctggaaaaag atggagaatc aggttagacc ggacgacctg gagagcgagg attgcctgga
 cctccaggta tcaaagggtc agctgggata cctggattcc ctggtatgaa aggacacaga
 ggcttcgatg gacgaaatgg agaaaagggt gaaacaggtg ctctggatt aaagggtgaa
 aatggtcttc caggcgaaaa tggagctcct ggacccatgg gtccaagagg ggtcctggt
 gagcgaggac ggccaggact tctggggct cgaggtgctc ggggtaatga cgggtgctcga
 ggcagtgatg gtcaaccagg ccctcctggt cctcctggaa ctgccggatt ccctggatcc
 cctggtgcta aggtggaagt tggacctgca ggtctcctg gttcaaatgg tggcctgga
 caaagaggag aacctggacc tcagggacac gctggtgctc aaggtcctcc tggcctcct
 gggattaatg gtagtcctgg tggtaaaggc gaaatgggtc ccgctggcat tctggagct
 cctggactga tgggagccc gggtcctcca ggaccagccg gtgctaattg tgctcctgga
 ctgagagggt gtgcagggtg gcctggtgaa aatggtgcca aaggagagcc cggaccagct
 ggtgaacgcg gtgaggctgg tattccaggt gttccaggag ctaaaaggcga agatggcaag
 gatggatcac ctggagaacc tgggtgcaat gggcttcag gagctgcagg agaaagggtg
 gccctgggtg tccgaggacc tgctggacca aatggcatcc caggagaaaa ggtcctgct
 ggagagcgtg gtgctccagg ccctgcaggg cccagaggag ctgctggaga acctggcaga
 gatggcgtcc ctggagggtc aggaatgagg ggcattgccc gaagtccagg aggaccagga
 agtgatggga aaccagggcc tcccgaagt caaggagaaa gtggtcgacc aggtcctcct
 gggccatctg gtccccagg tcagcctggt gtcatgggt tccccggtcc taaaggaaat

FIG. 3

3/15

gatggtgctc ctggttaagaa tggagaacga ggtggccctg gaggacctgg ccctcagggg
cctcctggaa agaatggtga aactggacct caaggacccc cagggcctac tgggcctggg
ggtgacaaag gagacacagg acccctggt ccacaaggat tacaaggctt gcctggtaca
ggtggtcctc caggagaaaa tggaaaacct ggggaaccag gtccaaaggg tgatgccggg
gcacctggag ctccaggagg caagggtgat gctggtgccc ctggtgaacg tggacctcct
ggattggcag gggccccagg acttagaggt ggagctgggc cccctgggtcc cgaaggagga
aagggtgctg ctggtcctcc tgggccacct ggtgctgctg gtactcctgg tctgcaagga
atgcctggag aaagaggagg tcttggaagt cctggtccaa agggtgacaa ggtgaaacca
ggcggcccag gtgctgatgg tgtcccaggg aaagatggcc caaggggtcc tactggtcct
attggtcctc ctggcccagc tggccagcct ggagataagg gtgaagggtg tggccccgga
cttcagggtg tagctggacc tcgtggtagc cctggtgaga gaggtgaaac tggcctcca
ggacctgctg gtttcctctg tgctcctgga cagaatggtg aacctgggtg taaaggagaa
agaggggctc cgggtgagaa aggtgaagga ggccctcctg gagttgcagg acccctgga
ggttctggac ctgctgggtc tctggtccc caaggtgtca aaggtgaacg tggcagtcct
ggtggacctg gtgctgctgg ctccctggt gctcgtgggc ttctggtcc tctggtagt
aatggttaacc caggaccccc aggtcccagc ggttctccag gcaaggatgg gccccaggt
cctgcgggta aactggtgc tcctggcagc cctggagtgt ctggaccaa aggtgatgct
ggccaaccag gagagaagg atcgctggt gccagggcc caccaggagc tccaggccca
cttgggattg ctgggatcac tggagcacgg ggtcttgag gaccaccagg catgccaggt
cctaggggaa gccctggccc tcaggggtgtc aagggtgaaa gtgggaaacc aggagctaac
ggtctcagtg gagaacgtgg tccccctgga cccaggggtc ttctggtct ggctggtaca
gctggtgaac ctggaagaga tggaaaacct ggatcagatg gtcttccagg ccgagatgga
tctcctggtg gcaagggtga tcgtggtgaa aatggctctc ctggtgcccc tggcgctcct
ggtcatccag gccacctgg tctgtcgtt ccagctggaa agagtgggtg cagaggagaa
agtggccctg ctggccctgc tgggtgctccc gttcccgagg gttccctggt tggtcctggt
cctcaaggcc cacgtggtga caaagggtgaa acagggtgaa gtggagctgc tggcatcaaa
ggacatcgag gattccctgg taatccagggt gccccaggtt ctccaggccc tgcctggtcag
caggggtgcaa tcggcagtc aggacctgca ggccccagag gacctgttg acccagtgga
cctcctggca aagatggaac cagtggacat ccagggtcca ttggaccacc agggcctcga
ggtaacagag gtgaaagagg atctgagggc tccccaggcc acccagggca accaggccct
cctggacctc ctggtgcccc tggtccttgc tgtggtggtg ttggagccgc tgccattgct
gggattggag gtgaaaaagc tggcggtttt gccccgtatt atggagatga accaatggat
ttcaaaatca acaccgatga gattatgact tcaactcaagt ctgttaatgg acaaatagaa
agcctcatta gtcctgatgg ttctcgtaaa aaccccgtc gaaactgcag agacctgaaa
ttctgccatc ctgaactcaa gagtggagaa tactgggttg accctaacca aggatgcaaa
ttggatgcta tcaagggtatt ctgtaatatg gaaactgggg aaacatgcat aagtgccaat
cctttgaatg ttccacggaa acactggtgg acagattcta gtgctgagaa gaaacacgtt
tggtttggag agtccatgga tgggtggttt cagtttagct acggcaatcc tgaacttcct
gaagatgtcc ttgatgtgca gctggcatto cttcgacttc tctccagccg agcttcccag
aacatcacat atcactgcaa aaatagcatt gcatacatgg atcaggccag tggaaatgta
aagaaggccc tgaagctgat ggggtcaaat gaaggtgaat tcaaggctga aggaaatagc
aaattcacct acacagttct ggaggatggt tgcacgaaac acactgggga atggagcaaa
acagtctttg aatatcgaac acgcaaggct gtgagactac ctattgtaga tattgcaccc
tatgacattg gtggtcctga tcaagaatgt ggtgtggacg ttggccctgt ttgcttttta
taa

FIG. 3 cont;

4/15

MMSFVQKGSWLLALLHPTIILATSSLFLQ
RPNSRENGGTENMFVMYLGNKDA SRDYIGMA
VVVDGQLTCVYNLGDREAELQVDQILTKSETK
EAVMDRVKFRQRIYQFARLNYTKGATSSSKPET
PGVYDMDGRNSNTLLNLDPENNVVFYVGGYP
DFKLP SRLSFPYKGCIELDDLNENVLSLYN
FKKTFNLNTTEVEVEPCRRRKEESDKNYFEGTG
YARVPTQPHAPIPTFGQTITQTTVDRLGLFFA
ENGDRFISLNIEDGKLMVRYKLNSELPERG
VGDAINNNGRDHSIQIKIGKLGKRMWINVDVQ
NTIIDGEVFDFSTYYLGGIPIAIRERFNIST
PAFRGCMKNLKKTS GVVRLNDTVGVTKKCSSE
DWKLVRSASFSSRGGLSFTDLDGLPPTDHLQA
SFGFQTFQPSGILLDHQWTNRNLQVTLLEDGY
IELSTSDSGGP IFKSPQTYMDGLLHYVSVIS
DNSGLRLLIDDDQLLRNSKRLKHISSSSRQSLR
LGGSNFEGCISNVFVQRLSLSPEVLDLTSNS
LKRDVSLGGCSLNKPPFLMLLLKGSTRFNKTK
TFRINQLLQDTPVASPRSVKVVWDANGQGG
GPKGDPGPPGIPGRNGDPGIPGQPGSPGSPG
PPGICESCPTGPQNYSPQYDSYDVKS GVAVG
GLAGYPGPAGPPGPPGPGTSGHPGSPGSPG
YQGPPEGEPGQAGPSGPPGPPGAIGPSGPAGK
DGESGRPGRPGERGLPGPPGIKGPAGIPGFP
GMKGHRGFDGRNGEKGEGTGA PGLKG ENGLPG
ENGAPGSPMGPRGAPGERGRPGLPGAAGARGN
DGARSDGQPGPPGPTAGFPGPSPGA AKGEV
GPAGSPG SNGAPGQRPGEPPQG HAGA GPPG
PPGINGSPG GKGEMGPA GIPGAPGLMGA RGP
PGPAGANGAPGLRGGAGEPGKNGAKGEPGPR
GERGEAGIPGVPGA KGEDGKDGSPGEPGANG
LPGAAGERGAPGFRGPAGPNGIPGEKGPAGE
RGAPGPAGPRGAAGEPGRDGVPGGPGMRGMP
GSPGGPGSDGKPGPPGSSQGESGRPGPPGPGSG
PRGQPGVMGFPGPKGNDGAPGKNGERGGPGG
PGPQGPBGKNGETGPGQPGPTGPGGDKGDT
GPPGPQGLQGLPGTGPGPPGENGKPGEPKG
DAGAPGAPGGKGDAGAPGERGPPGLAGAPGL
RGGAGPPGPEGGKGAGAPPGPPGAAGTPGLQ
GMPGERGGGLGSPGPKGDKGEPGGPGADGVPG
KDGPRGPTGP IGP PGPA GQPGDKGEGGAPGL
PGIAGPRGSPGERGETGPPGPAGFP GAPGQN
GEPGGKGERGAPGEKGE GPPGVAGPPGGSG
PAGPPGPQGVKGERGSPGGPGAGAFP GARGL
PGPPG SNGNPGPPGSGSPGKDGPPGPAGNT
GAPGSPGVSGPKGDAGQPGEGKSGPGAQGPPG
APGPLGIAGITGARGLAGPPGMPGPRGSPGP
QGVKGESGKPGANGLSGERGP PGPPQGLPGLA
GTAGEPPGRDGNPGSDGLPGRDGSPPGKGDRG
ENGSPGAPGAPGHPGPPGPVGPAGKSGDRGE
SGPAGPAGAPGPAGSRGAPGPQGP RGDKGET
GERGAAGIKGHRGFPGNPGAPGSPGPAGQQG
AIGSPGPAGPRGPVGPSPGPPGKDGTS GHPGP

FIG. 4

5/15

I G P P G P R G N R G E R G S E G S P G H P G Q P G P P G P P
G A P G P C C G G V G A A A I A G I G G E K A G G F A P Y Y G
D E P M D F K I N T D E I M T S L K S V N G Q I E S L I S P D
G S R K N P A R N C R D L K F C H P E L K S G E Y W V D P N Q
G C K L D A I K V F C N M E T G E T C I S A N P L N V P R K H
W W T D S S A E K K H V W F G E S M D G G F Q F S Y G N P E L
P E D V L D V Q L A F L R L L S S R A S Q N I T Y H C K N S I
A Y M D Q A S G N V K K A L K L M G S N E G E F K A E G N S K
F T Y T V L E D G C T K H T G E W S K T V F E Y R T R K A V R
L P I V D I A P Y D I G G P D Q E F G V D V G P V C F L

FIG 4 cont;

6 / 15

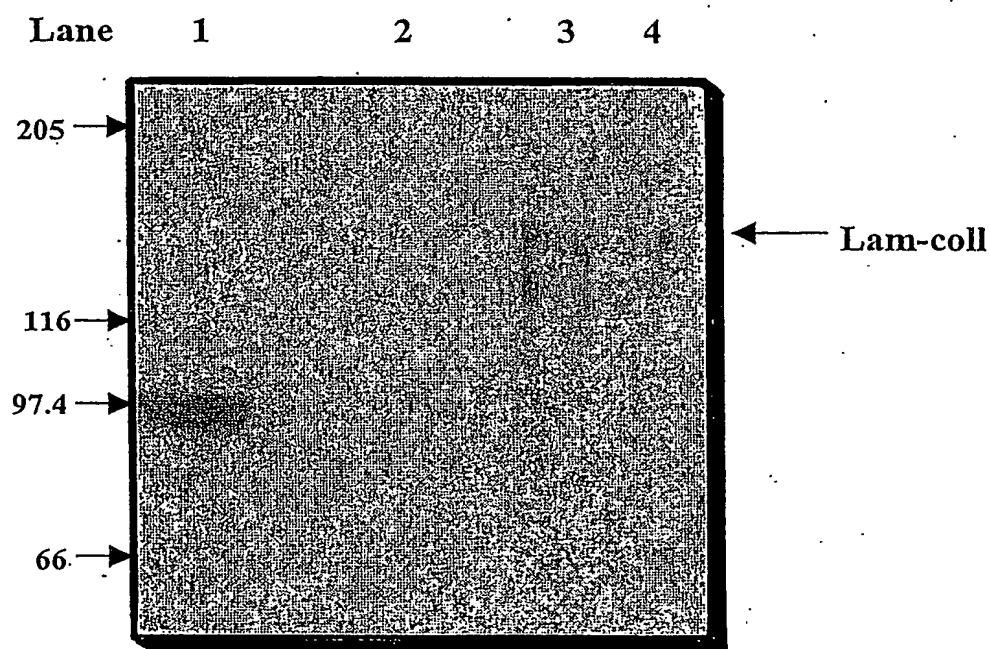


FIG. 5

7/15

gtgcaaaagg	ggagctggct	acttctcgct	ctgcttcac	ccactattat	At gatgagcttt
tcggaagact	ggaagcttgt	gcgatctgcc	tcattctcca	gaggaggaca	tttggcatgc
actgatttgg	gcttaccacc	tactgaccac	ctccaggcct	catttggatt	attgagtttc
caaccagtg	gcatattatt	agatcatcag	acatggacaa	ggaacctgca	tcagaccttt
gaagatgggt	acattgaatt	gagcaccagc	gatagcgcg	gccaatttt	ggtcactctg
cagacgtata	tggatggttt	actgcattat	gtatctgtaa	taagcgacaa	taaattotcca
cggcttctca	tcgatgacca	gcttctgaga	aatagcaaaa	ggctaaaaca	ctctggacta
tcccggcagt	ctctgcgtct	ggcggggagc	aattttgagg	gttgatttag	caatgttttt
gtccagagg	tatcactgag	tcctgaagtc	ctagatttga	ccagtaactc	tctcaagaga
gatgtgtccc	tgggaggctg	cagtttaaac	aaaccacctt	ttctaattgt	gcttaaaggt
tctaccagg	ttacaagac	caagactttt	cgtatcaacc	agctgttgca	ggacacacca
gtggcctccc	caaggagcgt	gaagggtgtg	caagatgcta	<u>atgggcaagg</u>	acctcaaggc
cccaagggag	atccaggccc	tcctgggtatt	cctgggagaa	atgggtgacc	tggtattcca
ggacaaccag	ggtccccctg	ttctcctggc	ccccctggaa	tctgtgaatc	atgccctact
ggtcctcaga	actattctcc	ccagtatgat	tcatatgatg	tcaagtctgg	agtagcagta
ggaggactcg	caggctatcc	tggaccagct	ggccccccag	gccctcccgg	tccccctggt
acatctggtc	atcctgggtc	ccctggatct	ccaggatacc	aaggaccccc	tggtgaacct
gggcaagctg	gtccttcagg	ccctccagga	cctcctgggt	ctataggctc	atctggctct
gctggaaaag	atggagaatc	aggtagacct	ggacgacctg	gagagcgagg	attgctgga
cctccaggta	tcaaaggtcc	agctgggata	cctggattcc	ctggtatgaa	aggacacaga
ggcttcgatg	gacgaaatgg	agaaaagggt	gaaacagggt	ctcctggatt	aaagggtgaa
aatggctctc	caggcgaaaa	tggagctcct	ggacccatgg	gtccaagagg	ggctcctggt
gagcgaggac	ggccaggact	tcctggggct	gcagggtgctc	ggggtaatga	cggtgctcga
ggcagtgatg	gtcaaccagg	ccctcctggt	cctcctggaa	ctgccggatt	ccctggatcc
cctgggtgcta	agggatgaat	tggacctgca	gggtctcctg	gttcaaattg	tgccccctgga
caaagaggag	aacctggacc	tcaggggcac	gctgggtgctc	aaggtcctcc	tggccctcct
gggattaatg	gtagtctctg	tggtaaaggc	gaaatgggtc	ccgctggcat	tcctggagct
cctggactga	tgggagcccc	gggtcctcca	ggaccagccg	gtgctaattg	tgctcctgga
ctgagagggt	gtgcagggtg	gcctggtaag	aatgggtgcca	aaggagagcc	cggaccacgt
ggtgaacgcg	gtgaggctgg	tattccagg	gttccaggag	ctaaaggcga	agatggcaag
gatggatcac	ctggagaacc	tggtgcaaat	gggcttccag	gagctgcagg	agaaaggggt
gccccctgggt	tccgaggacc	tgctggacca	aatggcatcc	caggagaaaa	gggtcctgct
ggagagcggt	gtgctccagg	ccctgcagg	cccagaggag	ctgctggaga	acctggcaga
gatggcgctc	ctggaggctc	aggaatgagg	ggcatgccc	gaagtccagg	aggaccagga
agtgatggga	aaccagggcc	tcccgggaag	caaggagaaa	gtggtcgacc	aggctcctct
gggccatctg	gtccccgagg	tcagcctggt	gtcatgggct	tccccggctc	taaggaaaat
gatgggtgctc	ctggtaagaa	tggagaacga	gggtggccctg	gaggacctgg	ccctcagggt
cctcctggaa	agaatggtga	aactggacct	caaggacccc	cagggcctac	tgggcctggt
ggtgacaaag	gagacacagg	accccctggt	ccacaaggat	tacaaggctt	gocctgtaca
ggtggtcctc	caggagaaaa	tggaaaacct	ggggaaccag	gtccaaagg	tgatgccggt
gcacctggag	ctccaggagg	caagggtgat	gctggtgccc	ctggtgaacg	tggacctcct
ggattggcag	gggccccagg	acttagaggt	ggagctggtc	cccctggtcc	cgaaggagga
aagggtgctg	ctggtcctcc	tgggccacct	ggtgctgctg	gtactcctgg	tctgcaagga
atgcctggag	aaagaggagg	tcttggaagt	cctggtccaa	agggtgacaa	gggtgaacca
ggcgcccgag	gtgctgatgg	tgtcccagg	aaagatggcc	caaggggctc	tactggtcct
attggtcctc	ctggcccagc	tggccagcct	ggagataagg	gtgaagggtg	tggcccgga
cttccaggta	tagctggacc	tcgtggtagc	cctggtgaga	gaggtgaaac	tggccctcca
ggacctgctg	gtttccctgg	tgctcctgga	cagaatggtg	aacctggtgg	taaaggagaa
agaggggctc	cgggtgagaa	aggtgaagga	ggccctcctg	gagttgcagg	accccctgga
ggttctggac	ctgctggtcc	tcctgggtccc	caagggtgtca	aagggtgaacg	tggcagtcct
ggtggacctg	gtgctgctgg	cttccctggt	gctcgtggtc	ttcctggtcc	tcctggtagt
aatggttaacc	caggaccccc	aggtcccagc	ggttctccag	gcaaggatgg	gccccagggt
cctgcgggta	acactgggtc	tcctggcagc	cctggagtgt	ctggaccaa	aggtgatgct

FIG. 6

8/15

```

ggccaaccag gagagaaggg atcgccctggt gccaggggcc caccaggagc tccaggccca
cttgggattg ctgggatcac tggagcacgg ggtcttgacg gaccaccagg catgccagg
cctaggggaa gccctggccc tcagggtgtc aagggtgaaa gtgggaaacc aggagctaac
ggtctcagtg gagaacgtgg tccccctgga cccaggggtc ttcttggtct ggctggtaca
gctggtgaac ctggaagaga tggaaaccct ggatcagatg gtcttccagg ccgagatgga
tctcctggtg gcaagggtga tcgtggtgaa aatggctctc ctggtgcccc tggcgctcct
ggtcatccag gccacctgg tcctgtcggg ccagctggaa agagtgggtga cagaggagaa
agtggccctg ctggccctgc tgggtgctccc ggtcctgctg gttcccgagg tgctcctggt
cctcaaggcc cacgtggtga caaagggtgaa acagggtgaa gtggagctgc tggcatcaaa
ggacatcgag gattccctgg taatccagggt gccccagggt ctcagggcc tgctggtcag
cagggtgcaa tcggcagtc ccaggcctgca gacctggttg acccagtgga
cctcctggca aagatggaac cagtggacat ccagggtccca ttggaccacc agggcctcga
ggtaacagag gtgaaagagg atctgagggc tccccaggcc acccagggca accaggccct
cctggacctc ctggtgcccc tggtccttgc tgtggtggtg ttggagccgc tgccattgct
gggattggag gtgaaaaagc tggcggtttt gccccgtatt atggagatga accaatggat
ttcaaaatca acaccgatga gattatgact tcactcaagt ctgttaatgg acaaatagaa
agcctcatta gtccctgatg ttctcgtaaa aaccccgcta gaaactgcag agacctgaaa
ttctgccatc ctgaactcaa gaggggagaa tactgggttg accctaacca aggatgcaaa
ttggatgcta tcaagggtatt ctgtaatatg gaaactgggg aaacatgcat aagtgccaat
cctttgaatg ttccacggaa acactgggtg acagattcta gtgctgagaa gaaacacgtt
tgggttgag agtccatgga tgggtggttt cagtttagct acggcaatcc tgaacttcct
gaagatgtcc ttgatgtgca gctggcattc cttcgacttc tctccagccg agcttcccag
aacatcacat atcactgcaa aaatagcatt gcatacatgg atcaggccag tggaaatgta
aagaaggccc tgaagctgat ggggtcaaat gaagggtgaa tcaaggctga aggaaatagc
aaattcacct acacagttct ggaggatggt tgcacgaaac aactgggga atggagcaaa
acagtctttg aatatcgaac acgcaaggct gtgagactac ctattgtaga tattgcaccc
tatgacattg gtggtcctga tcaagaattt ggtgtggacg ttggccctgt ttgcttttta
taa

```

FIG. 6 cont;

9/15

MMSFVQKGSWLLALLHPTIILACSEEDWKLVR
RSASFSSRGGQLSFTDLDGLPPTDHLQASFGFQ
TFQPSGILLDHQWTRNLQVTLLEDGYIELST
SDSGGPPIFKSPQTYMDGLLHYVSVISDNSGL
RLLLIDDQLLRNSKRLKHISSSSRQSLRLGGSN
FEGCISNVFVQRLSLSPEVLDLTSNSLKRDTV
SLGGCSSLNKPFFLMLLKGSTRENNKTFRIN
QLLQDTPVASPRSVKVVWQDANGGQGPGPGPKGD
PGPPGIPGRNGDPGIPGQPGSPGSPGPPGIC
ESCPTGPQNYSPQYDSYDVKS GVA VGGLAGY
PGPAGPPGPPGPPGPGTSGHPGSPGSPGYQGP
GEPGQAAGPSGPPGPPGPAIGPSGPAGKDGESG
RPGRPGERGLPGPPGPIKGPAGIPGFPGMKGH
RGFDGRNGEKGETGAPGLKGENG L PGENGAP
GPMGPRGAPGERGRPGLPGAAGARGNDGAR
SDGQPPGPPGPPGTAGFPGPSPGA KGEVGPAGS
PGSNGAPGQRGEPGPQGHAQAQGP GPPGIN
GSPGGKGEMGPA GIPGAPGLMGARGPPGPA
ANGAPGLRGGA GEPGKNGAKGEPPGPRGERGE
AGIPGVPGA KGEDGKDGSPGEPGANGLPGA
GERGAPGF RGPAGPNGIPGEKGPAGERGAPG
PAGPRGAAGEPPGRDGVPGGPGMRGMPGSPGG
PGSDGKPGPPGSGSGGESGRPGPPGSPGPRGQP
GVMGFPGPKGNDGAPGKNGERGGPGPGPPQG
PPGKNGETGPQGPPGPGTGPGGDKGDTGPPGP
QGLQGLPGTGPGPPGNGKPGEPGPKGDAGAP
GAPGGKGDAGAPGERGPPGLAGAPGLRGAG
PPGPPEGGKGAAGPPGPPGAAGTPGLQGMPE
RGGLGSPGPKGDKGEPGGPGADGVPGKDGPR
GPTGPPIGPPGPA GQPGDKGEGGAPGLPGIAG
PRGSPGERGETGPPGPAGFPGAPGQNGEPGG
KGERGAPGEKGE GPPGVAGPPGSGSPAGPP
GPQGVKGERGSPGGPGGAAGFPGARGLPGPPG
SNGNPGPPGSPSGSPGKDGPPGPAGNTGAPGS
PGVSGPKGDAGQPG EKDGSPGAQGP GPPGL
GIAGITGARGLAGPPGMPGPRGSPGPQGVKG
ESGKPGANGLSGERGP GPPQGLPGLAGTAG
PGRDGNPGSDGLPGRDGSPPGGKGD RGENGSP
GAPGAPGHPGPPGPVGPAGKSGDRGESGPAG
PAGAPGPAGSRGAPGPQGPRGDKGETGERGA
AGIKGHRGFPGNPGA PGSPGPAGQQGAIGSP
GPAGPRGPVGPSPGPPGKDGTS GHPGPPIGPPG
PRGNRGERGSEGS PGHPGQPGPPGPPGAPGP
CCGGVGAAAAIAGIGGEKAGGFAPYYGDEPMD
FKINTDEIMTSLKSVNGQIESLISP DGSRKN
PARNCRD LK FCHPELKS GEYWVDPNQGCKLD
AIKVFCNMETGETCISANPLNVPRKHWWTDS
SAEKKHVWFGE SMDGGGFQFSYGNPELPEDVL
DVQLAFLRLLSRASQNI TYHCKNSIAYMDQ
ASGNVKKALKLMGSNEGE FKAEGNSKFTYTV
LEDGCTKHTGEWSKT VFEYRTRKAVRLPIVD
IAPYDIGGP DQEF GVDVGPVCF L

FIG. 7

10/15

atgaagtc	cagcggcctc	ttccccttcc	tggtgctgct	tgccctggga
actctggcac	cttgggctgt	ggaaggctct	ggaaagtcc	tcaaagctgg
agtctgtcct	cctaagaaat	ctgccagtg	ccttagatac	aagaaacctg
agtgccagag	tgactggcag	tgtccaggga	agaagagatg	ttgtcctgac
acttgtggca	tcaaatgcct	ggatcctgtt	gacaccccaa	accaacaag
gaggaagcct	gggaagtgcc	cagtgactta	tggccaatgt	ttgatgctta
acccccccaa	tttctgtgag	atggatggcc	agtgcaagcg	tgacttgaag
tgttgcattg	gcattgtgtg	gaaatcctgc	gtttcccctg	tgaaagct

gctgt	tgaaggagga	tgttcccatc	ttggtcagtc	ctatgoggat
agagatgtct	ggaagccaga	accatgccaa	atatgtgtct	gtgactcagg
atccgttctc	tgcatgaca	taatatgtga	cgatcaagaa	ttagactgcc
ccaaccaga	aattccattt	ggagaatgtt	gtgcagtttg	cccacagcct
ccaactgctc	ctactcgccc	tcctaattggt	caaggacctc	aaggccccaa
gggagatcca	ggccctcctg	gtattcctgg	gagaaatggg	gaccctggta
ttccaggaca	accaggggtc	cctgggttctc	ctggccccc	tggaaatctgt
gaatcatgcc	ctactgggtc	tcagaactat	tctccccagt	atgattcata
tgatgtcaag	tctggagtag	cagtaggagg	actcgcaggc	tatcctggac
cagctggccc	cccaggccct	cccggtcccc	ctggtacatc	tggtcatcct
ggttcccctg	gatctccagg	ataccaagga	ccccctgggtg	aacctgggca
agctgggtcct	tcaggccctc	caggacctcc	tggtgctata	ggtccatctg
gtcctgctgg	aaaagatgga	gaatcaggta	gacccgagcg	acctggagag
cgaggattgc	ctggacctcc	aggtatcaaa	ggtccagctg	ggatacctgg
attccctgggt	atgaaaggac	acagaggctt	cgatggacga	aatggagaaa
agggtgaaac	aggtgctcct	ggattaaagg	gtgaaaatgg	tcttccaggc
gaaaatggag	ctcctggacc	catgggtcca	agaggggctc	ctgggtgagcg
aggacggcca	ggacttcctg	gggctgcagg	tgctcggggg	aatgacgggtg
ctcgaggcag	tgatgggtcaa	ccaggccctc	ctggtcctcc	tggaaactgcc
ggattccctg	gatcccctgg	tgctaagggt	gaagttggac	ctgcagggtc
tcttggttca	aatggtgccc	ctggacaaaag	aggagaacct	ggacctcagg
gacacgctgg	tgctcaagggt	cctcctggcc	ctcctgggat	taatggtagt
cctgggtggt	aaggcgaaat	gggtcccgt	ggcattcctg	gagctcctgg
actgatggga	gcccgggggtc	ctccaggacc	agccgggtgct	aatggtgctc
ctggactgcg	aggtggtgca	ggtgagcctg	gtaagaatgg	tgccaaagga
gagcccgagc	cacgtggtga	acgcggtgag	gctggtattc	cagggtgtcc
aggagctaaa	ggcgaagatg	gcaaggatgg	atcacctgga	gaacctgggtg
caaattgggt	tccaggagct	gcaggagaaa	ggggtgcccc	tgggttccga
ggacctgctg	gaccaaattg	catcccagga	gaaaagggtc	ctgctggaga
gcgtgggtgct	ccaggccctg	cagggccccag	aggagctgct	ggagaacctg
gcagagatgg	cgtccctgga	ggtccaggaa	tgaggggcat	gcccgggaagt
ccaggaggac	caggaagtga	tgggaaacca	gggcctcccg	gaagtcaagg
agaaagtgggt	cgaccagggtc	ctcctggggc	atctgggtccc	cgaggtcagc
ctgggtgtcat	gggcttcccc	ggtcctaag	gaaatgatgg	tgctcctgggt

FIG. 8

aagaatggag	aacgaggtgg	ccctggagga	cctggccctc	agggtcctcc
tggaaagaat	ggtgaaactg	gacctcaagg	accccaggg	cctactgggc
ctggtggtga	caaaggagac	acaggacccc	ctggtccaca	aggattacaa
ggcttgcttg	gtacaggtgg	tcctccagga	gaaaatggaa	aacctgggga
accaggtcca	aaggggtgatg	ccggtgcacc	tggagctcca	ggaggcaagg
gtgatgctgg	tgcccctggt	gaacgtggac	ctcctggatt	ggcagggggc
ccaggactta	gaggtggagc	tggccccct	ggtcccgaag	gaggaaaggg
tgctgctggt	cctcctgggc	cacctggtgc	tgctggtact	cctggtctgc
aaggaatgcc	tggagaaaga	ggaggtcctg	gaagtccctg	tccaaagggt
gacaaggggtg	aaccaggcgg	cccaggtgct	gatgggtgtcc	cagggaaaga
tggcccaagg	ggtcctactg	gtcctattgg	tcctcctggc	ccagctggcc
agcctggaga	taaggggtgaa	ggtggtgccc	ccggacttcc	aggtatagct
ggacctcgtg	gtagccctgg	tgagagaggt	gaaactggcc	ctccaggacc
tgctggtttc	cctggtgctc	ctggacagaa	tggatgaacct	ggtggtaaag
gagaaagagg	ggctccgggt	gagaaagggtg	aaggaggccc	tcctggagtt
gcaggacccc	ctggaggttc	tggacctgct	ggtcctcctg	gtccccaagg
tgtcaaagggt	gaacgtggca	gtcctggtgg	acctggtgct	gctggcttcc
ctggtgctcg	tggctctcct	ggtcctcctg	gtagtaatgg	taaccaggga
ccccagggtc	ccagcgggtc	tcagggaag	gatgggcccc	caggtcctgc
gggtaacact	ggtgctcctg	gcagccctgg	agtgtctgga	ccaaaagggtg
atgctggcca	accaggagag	aagggatcgc	ctggtgcca	gggcccacca
ggagctccag	gcccacttgg	gattgctggg	atcactggag	cacgggggtct
tgcaggacca	ccaggcatgc	caggtcctag	gggaagccct	ggccctcagg
gtgtcaagggt	tgaagtggtg	aaaccaggag	ctaacgggtct	cagtggagaa
cgtggtcccc	ctggacccca	gggtcttcct	ggtctggctg	gtacagctgg
tgaacctgga	agagatggaa	accctggatc	agatggtctt	ccaggccgag
atggatctcc	tgggtggcaag	ggtgatcgtg	gtgaaaatgg	ctctcctggt
gcccctggcg	ctcctgggtca	tcaggccca	cctggtcctg	tcggtccagc
tggaaagagt	ggtgacagag	gagaaagtgg	ccctgctggc	cctgctgggtg
ctcccgggtcc	tgctggttcc	cgaggtgctc	ctggtcctca	aggcccacgt
ggtgacaaag	gtgaaacagg	tgaacgtgga	gctgctggca	tcaaaggaca
tcgaggattc	cctggtaatc	caggtgcccc	aggttctcca	ggccctgctg
gtcagcagggt	tgcaatcggc	agtccaggac	ctgcaggccc	cagaggacct
ggttgaccca	gtggacctcc	tggcaaagat	ggaaccagtg	gacatccagg
tcccattgga	ccaccagggc	ctcgaggtaa	cagaggtgaa	agaggatctg
agggtcctcc	aggccaccca	gggcaaccag	gcccctcctg	acctcctggt
gcccctggtc	cttgcctgtg	tgggtgttga	gcccgtgcca	ttgctgggat
tggaggtgaa	aaagctggcg	gttttgcccc	gtattatgga	gatgaaccaa
tggatttcaa	aatcaacacc	gatgagatta	tgacttcact	caagtctggt
aatggacaaa	tagaaagcct	cattagtcct	gatggttctc	gtaaaaaccc
cgctagaaac	tgcagagacc	tgaattctctg	ccatcctgaa	ctcaagagtg
gagaatactg	ggttgaccct	aaccaaggat	gcaaattgga	tgctatcaag
gtattctgta	atatggaaac	tggggaaaca	tgcataagtg	ccaatccttt
gaatgttcca	cggaaacact	ggtggacaga	ttctagtgtc	gagaagaac
acgtttgggt	tggagagtcc	atggatgggtg	gttttcagtt	tagctacggc
aatcctgaac	ttcctgaaga	tgtccttgat	gtgcagctgg	cattccttcg
acttctctcc	agccgagctt	cccagaacat	cacatatcac	tgcaaaaata
gcattgcata	catggatcag	gccagtggaa	atgtaaagaa	ggccctgaag
ctgatggggt	caaatgaagg	tgaattcaag	gctgaaggaa	atagcaaatt

FIG. 8 cont;

12/15

cacctacaca gttctggagg atggttgcac gaaacacact ggggaatgga
gcaaaacagt ctttgaatat cgaacacgca aggctgtgag actacctatt
gtagatattg cacoctatga cattggtggt cctgatcaag aatttggtgt
ggacgttggc cctgtttgct ttttataa

FIG. 8cont;

13/15

Met K S S G L F P F L V L L A L G T L A P W A V E G S G K S
F K A G V C P P K K S A Q C L R Y K K P E C Q S D W Q C P G
K K R C C P D T C G I K C L D P V D T P N P T R R K P G K C
P V T Y G Q C L Met L N P P N F C E Met D G Q C K R D L K C
C Met G Met C G K S C V S P V K A

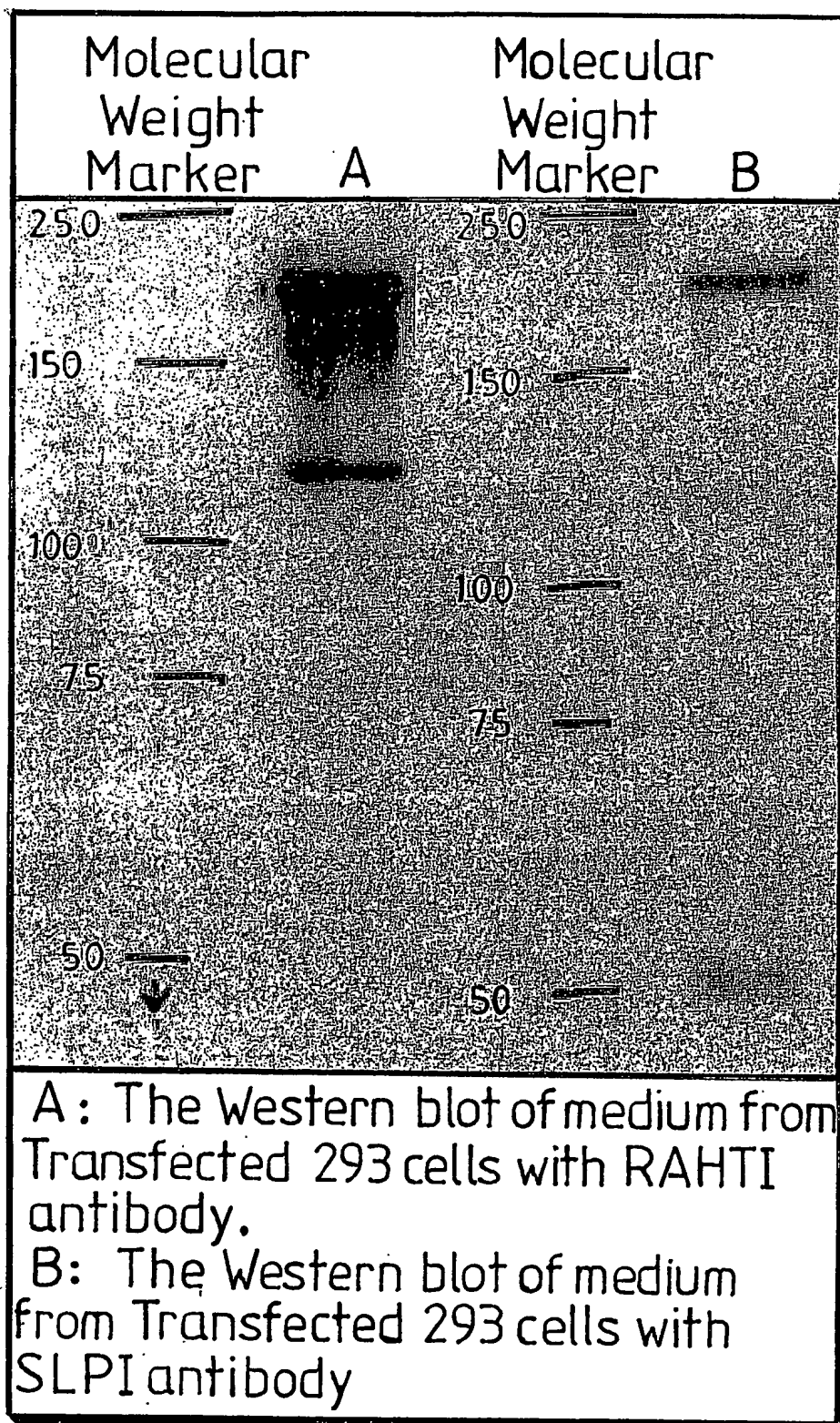
A V E G G C S H L G Q S Y A D R D V W K P E P C Q I C V C D
S G S V L C D D I I C D D Q E L D C P N P E I P F G E C C A
V C P Q P P T A P T R P P N G Q G P Q G P K G D P G P P G I
P G R N G D P G I P G Q P G S P G S P G P P G I C E S C P T
G P Q N Y S P Q Y D S Y D V K S G V A V G G L A G Y P G P A
G P P G P P G P P G T S G H P G S P G S P G Y Q G P P G E P
G Q A G P S G P P G P P G A I G P S G P A G K D G E S G R P
G R P G E R G L P G P P G I K G P A G I P G F P G Met K G H
R G F D G R N G E K G E T G A P G L K G E N G L P G E N G A
P G P Met G P R G A P G E R G R P G L P G A A G A R G N D G
A R G S D G Q P G P P G P P G T A G F P G S P G A K G E V G
P A G S P G S N G A P G Q R G E P G P Q G H A G A Q G P P G
P P G I N G S P G G K G E Met G P A G I P G A P G L Met G A
R G P P G P A G A N G A P G L R G G A G E P G K N G A K G E
P G P R G E R G E A G I P G V P G A K G E D G K D G S P G E
P G A N G L P G A A G E R G A P G F R G P A G P N G I P G E
K G P A G E R G A P G P A G P R G A A G E P G R D G V P G G
P G Met R G Met P G S P G G P G S D G K P G P P G S Q G E S
G R P G P P G P S G P R G Q P G V Met G F P G P K G N D G A
P G K N G E R G G P G G P G P Q G P P G K N G E T G P Q G P
P G P T G P G G D K G D T G P P G P Q G L Q G L P G T G G P
P G E N G K P G E P G P K G D A G A P G A P G G K G D A G A
P G E R G P P G L A G A P G L R G G A G P P G P E G G K G A
A G P P G P P G A A G T P G L Q G Met P G E R G G L G S P G
P K G D K G E P G G P G A D G V P G K D G P R G P T G P I G
P P G P A G Q P G D K G E G G A P G L P G I A G P R G S P G
E R G E T G P P G P A G F P G A P G Q N G E P G G K G E R G
A P G E K G E G G P P G V A G P P G G S G P A G P P G P Q G
V K G E R G S P G G P G A A G F P G A R G L P G P P G S N G
N P G P P G P S G S P G K D G P P G P A G N T G A P G S P G
V S G P K G D A G Q P G E K G S P G A Q G P P G A P G P L G
I A G I T G A R G L A G P P G Met P G P R G S P G P Q G V K
G E S G K P G A N G L S G E R G P P G P Q G L P G L A G T A
G E P G R D G N P G S D G L P G R D G S P G G K G D R G E N
G S P G A P G A P G H P G P P G P V G P A G K S G D R G E S

FIG. 9

14/15

G P A G P A G A P G P A G S R G A P G P Q G P R G D K G E T
G E R G A A G I K G H R G F P G N P G A P G S P G P A G Q Q
G A I G S P G P A G P R G P V G P S G P P G K D G T S G H P
G P I G P P G P R G N R G E R G S E G S P G H P G Q P G P P
G P P G A P G P C C G G V G A A A I A G I G G E K A G G F A
P Y Y G D E P Met D F K I N T D E I Met T S L K S V N G Q I
E S L I S P D G S R K N P A R N C R D L K F C H P E L K S G
E Y W V D P N Q G C K L D A I K V F C N Met E T G E T C I S
A N P L N V P R K H W W T D S S A E K K H V W F G E S Met D
G G F Q F S Y G N P E L P E D V L D V Q L A F L R L L S S R
A S Q N I T Y H C K N S I A Y Met D Q A S G N V K K A L K L
Met G S N E G E F K A E G N S K F T Y T V L E D G C T K H T
G E W S K T V F E Y R T R K A V R L P I V D I A P Y D I G G
P D Q E F G V D V G P V C F L Stop

FIG. 9 cont;

15 / 15FIG.10